

# Anti-PCNA Antibody (clone PC10)

Mouse Anti Human Monoclonal Antibody

Catalog # ALS17848

## Product Information

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<b>Application</b>	WB, IHC-P, IHC-F, IP, FC
<b>Primary Accession</b>	<a href="#">P12004</a>
<b>Predicted</b>	Human, Mouse, Rat, Rabbit, Hamster, Chicken, Rhesus, Sheep, Xenopus, Horse, Dog, Cat
<b>Host</b>	Mouse
<b>Clonality</b>	Monoclonal
<b>Isotype</b>	IgG2a
<b>Clone Names</b>	PC10
<b>Calculated MW</b>	28769
<b>Concentration (mg/ml)</b>	1 mg/ml

## Additional Information

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<b>Gene ID</b>	5111
<b>Alias Symbol</b>	PCNA
<b>Other Names</b>	PCNA, Cyclin
<b>Target/Specificity</b>	Recognizes the proliferating cell nuclear antigen, also known as PCNA or cyclin. PCNA is a 261 amino acid ~28 kD nuclear protein vital for cellular DNA synthesis at the replication fork through its interaction with. PCNA is the auxilliary protein for ...
<b>Reconstitution &amp; Storage</b>	Purified
<b>Precautions</b>	Anti-PCNA Antibody (clone PC10) is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

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<b>Name</b>	PCNA
<b>Function</b>	Confers DNA tethering and processivity to DNA polymerases and other proteins (PubMed: <a href="#">24695737</a> , PubMed: <a href="#">24939902</a> , PubMed: <a href="#">35585232</a> ). Auxiliary protein of DNA polymerase delta and epsilon, is involved in the control of DNA replication by increasing the polymerases' processivity during elongation of the leading strand (PubMed: <a href="#">35585232</a> ). Induces a robust stimulatory effect on the 3'-5' exonuclease and 3'-phosphodiesterase, but not apurinic-aprimidinic (AP) endonuclease, APEX2 activities. Has to be loaded onto DNA in order to be able to stimulate APEX2. Plays a key role in DNA damage response (DDR) by being conveniently positioned at the replication

fork to coordinate DNA replication with DNA repair and DNA damage tolerance pathways (PubMed:[24939902](#)). Acts as a loading platform to recruit DDR proteins that allow completion of DNA replication after DNA damage and promote postreplication repair: monoubiquitinated PCNA leads to recruitment of translesion (TLS) polymerases, while 'Lys-63'-linked polyubiquitination of PCNA is involved in error-free pathway and employs recombination mechanisms to synthesize across the lesion (PubMed:[24695737](#)).

#### **Cellular Location**

Nucleus. Note=Colocalizes with CREBBP, EP300 and POLD1 to sites of DNA damage (PubMed:24939902). Forms nuclear foci representing sites of ongoing DNA replication and vary in morphology and number during S phase (PubMed:15543136). Co-localizes with SMARCA5/SNF2H and BAZ1B/WSTF at replication foci during S phase (PubMed:15543136). Together with APEX2, is redistributed in discrete nuclear foci in presence of oxidative DNA damaging agents

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.